

NEW RECORDS FOR THE GENUS *NEPHROPSIS* WOOD-MASON (CRUSTACEA, DECAPODA, NEPHROPIDAE) FROM NORTHERN AUSTRALIA, WITH THE DESCRIPTION OF TWO NEW SPECIES.

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ABSTRACT

Six species of the nephropid lobster genus *Nephropsis* Wood-Mason from northern Australia were studied, and new records given for four previously known species. Two new species, *N. holothuisi* n. sp. and *N. serrata* n. sp., are described. These new species are closely allied to *N. rosea* Bate from the Western Atlantic and *N. stewarti* Wood-Mason from Indian Ocean and western Pacific waters, respectively. A key to the species of *Nephropsis* known from Australian waters is also provided.

KEYWORDS: Crustacea, Decapoda, *Nephropsis*, new species, northern Australia.

INTRODUCTION

The nephropid lobster genus *Nephropsis* Wood-Mason, 1873, is represented in Indo-West Pacific waters by seven species: *N. stewarti* Wood-Mason, 1873 (type species of the genus); *N. carpenteri* Wood-Mason, 1885; *N. sulmi* Bate, 1888; *N. ensirostris* Alcock, 1901; *N. malhaensis* Borradaile, 1910; *N. sulcata* Macpherson, 1990; and *N. acanthura* Macpherson, 1990 (Macpherson, 1990). The genus is also known from the eastern Pacific and the Atlantic.

Three species have been previously recorded from Australia: *N. sulmi*, *N. sulcata* and *N. acanthura*. These species are apparently restricted to northeast Australia (Macpherson, 1990). This paper describes material, including two new species, from the interesting collections from northern and Western Australia made available by A.J. Bruce (Northern Territory Museum of Arts and Sciences, Darwin, NT) and V. Wadley (CSIRO, Marine Laboratory, North Beach, WA). A key to the species of *Nephropsis* in Australia is given.

Type specimens will be deposited in the Northern Territory Museum of Arts and Sciences, Darwin (NTM). The measurements given in this paper refer to carapace length, including rostrum. The terminology used follows Holthuis (1974).

SYSTEMATICS

Nephropsis acanthura Macpherson, 1990

Nephropsis acanthura Macpherson, 1990: 302 (key), 311, figs 5d, 9d-f, 11a-b, 16d (type-locality: Philippines, west of Luzon, 970 m).

Material examined. 1 male, 36.7 mm, 3 February 1988, Stn G1, W of Geraldton, WA, 29°05'S, 113°04'E, 880 m, coll. B. Wallner, NTM Cr007045; 2 males, 32.3 - 31.7 mm, 25 January 1991, NW of Point Cloates, WA, 22°28.6'S, 113°12.4'E, 1258-1305 m.

Remarks. The specimens are very similar to with the type material. This species has been recorded from Madagascar, Philippines, New Caledonia, Chesterfield Islands, NE and NW Australia from 750 to 1305 m.

Nephropsis holthuisi n. sp. (Figs 1-3)

HOLOTYPE - 1 male, 48.0 mm, NTM Cr007044, 25 January 1988, Indian Ocean, W of Ashmore Reef, WA, 13°06'S, 122°18'E, 900-1000 m, Stn S9, coll. B. Wallner.

PARATYPE NTM Cr007043 - 1 ov. female, 35.2 mm, same data as holotype.

Description of holotype. Carapace finely granulate, sparsely pubescent. Rostrum with a pair of strong lateral spines placed slightly behind midlength. Rostrum horizontal, 0.45 times

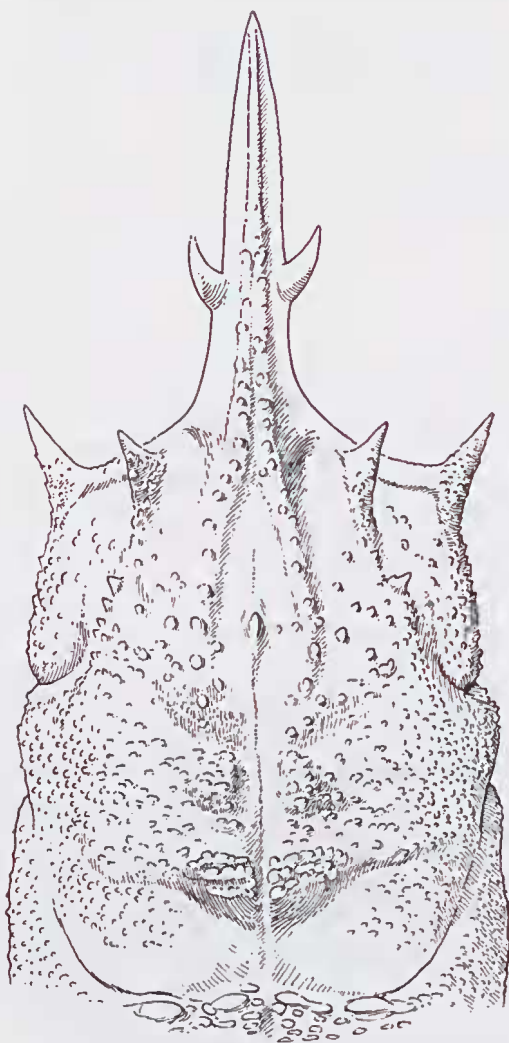


Fig. 1. *Nephropsis holthuisi* n. sp., holotype, 48.0 mm. Anterior part of the carapace, dorsal view.

length of rest of carapace. Median groove on rostrum extends past lateral rostral spines. Subdorsal carinae granulate, without spines. Supraorbital spines well developed, as long as lateral rostral spines. Antennal spines stronger than supraorbital spines. One small postsupraorbital spine present. Distance between level of the supraorbital spines and gastric tubercle about 0.4 times the distance between gastric tubercle and postcervical groove. Postcervical, cervical and hepatic grooves distinct, postcervical groove passing dorsal midline. Carinae on posterior carapace poorly developed. Distance between orbital border and postcervical groove twice distance between postcervical groove and posterior border of carapace.

Second to sixth abdominal somites with conspicuous median carina covered with short, dense hairs. Anterior border of pleuron of second abdominal pleura spineless. Anterior border of pleuron of second abdominal segment convex, ending in long, sharp point. Anterior borders of third to fifth segments less convex than anterior border of second segment, each ending in a long acute point.

First pair of chelipeds subequal. 1.6 times carapace length (with rostrum), sparsely granulate, moderately covered with short pubescence, setae longer on dorsal margins of articles, especially on movable finger. First pair of pereopods exceeding rostrum by length of merus; carpus slightly shorter than the palm; palm as long as fingers; chela 4 times longer than high, longer than postorbital length of carapace. Merus with small subdistal dorsal spine; carpus with anterodorsal spine, two spines on inner dorsal border at midlength, one spine on inner margin near articulation with palm; palm and fingers without spines. Second pair of pereopods extends past orbital edge by length of merus; carpus somewhat shorter than palm, 3.6 times longer than high; palm 4.8 times longer than high and 2.5 times longer than fingers. Third pair of pereopods slightly exceeding merus of second pair, with carpus 0.6 times length of palm, 3.8 times longer than high; palm 7.4 times longer than high and 3.9 times longer than fingers. Fourth pair of pereopods slightly shorter than third pair. Fifth pair of pereopods slightly shorter than fourth pair. Dactylus of fourth and fifth pereopods 0.6 times length of propodus.

Coxal processes on second pair of pereopods rounded. Anterior border of coxal processes on third pair of pereopods with four sharp teeth.

Exopod of uropods with conspicuous, fully formed diaeresis. Outer border of exopod and endopod terminating in single spine.

Variations. Female paratype with two small spines on posterior portion of each subdorsal carina, at level of postsupraorbital spines. Chelipeds less pubescent. Coxal processes on the second pair of pereopods of female bluntly rounded. Coxal processes on third pair of pereopods toothless. Thelycum raised, anterior margin between bases of third legs rounded, posterior incision narrow.

Remarks. *Nephropsis holthuisi* belongs to a group of species (*N. rosea* Bate, *N. aculeata* Smith from the Western Atlantic and *N. carpenteri* from the Bay of Bengal) which share the following features: one pair of lateral spines on the rostrum, no spines on the anterior borders

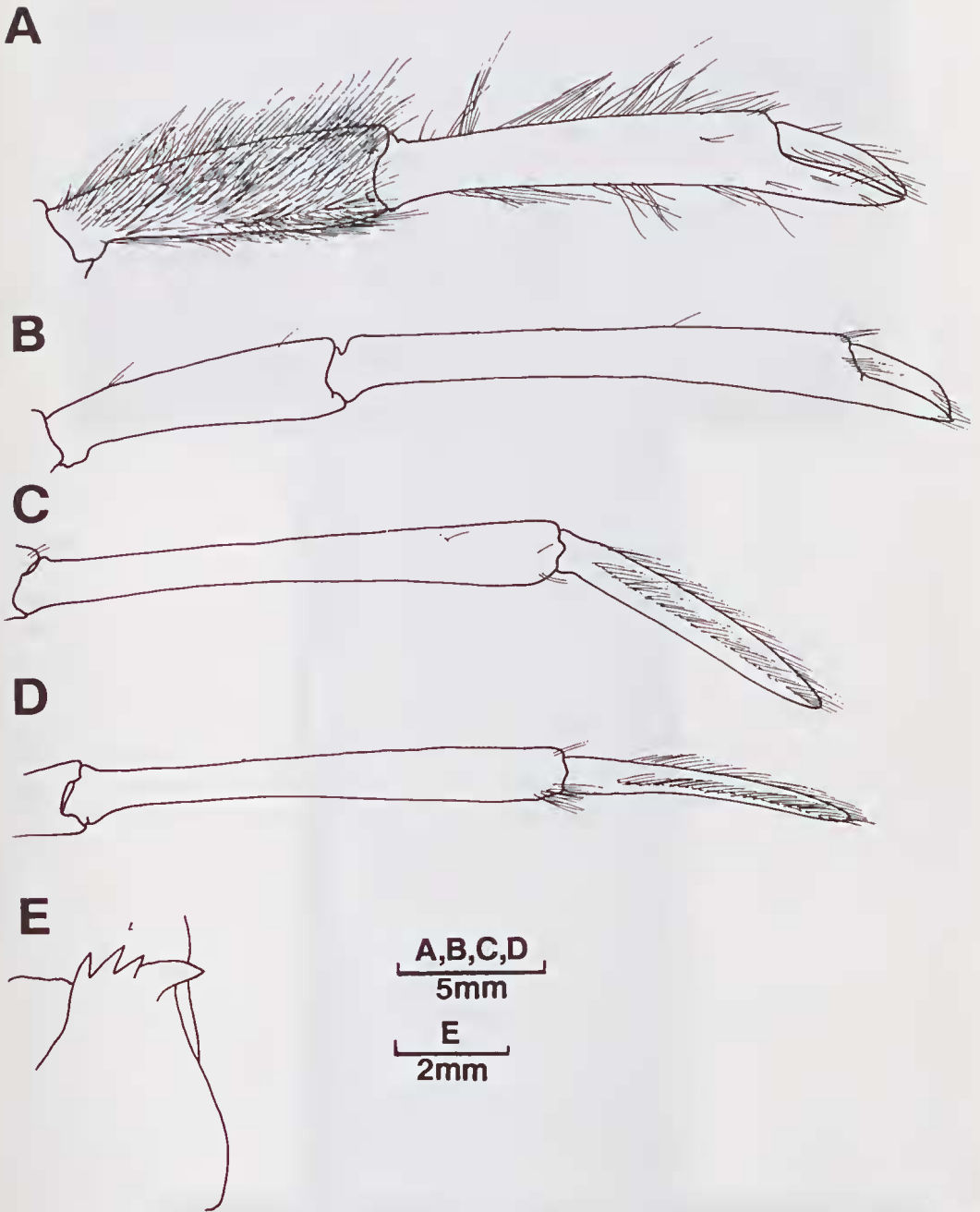


Fig. 2. *Nephropsis holthuisi* n. sp., holotype, 48.0 mm: A, second pereopod; B, third pereopod; C, fourth pereopod; D, fifth pereopod; E, coxa of the third left pereopod.

of the abdominal pleurae, a median carina on the second to sixth abdominal somites, dorsal surface of the telson without spines and a diaeresis on the exopod of the uropods.

Nephropsis holthuisi differs from *N. rosea* by the position of the gastric tubercle. In *N. rosea* the

distance between the supraorbital spine and the gastric tubercle is two-thirds the distance between the gastric tubercle and the postcervical groove. This distance is less than one-half in the new species.

Nephropsis aculeata is easily distinguished from *N. holthuisi* by the absence of spines behind

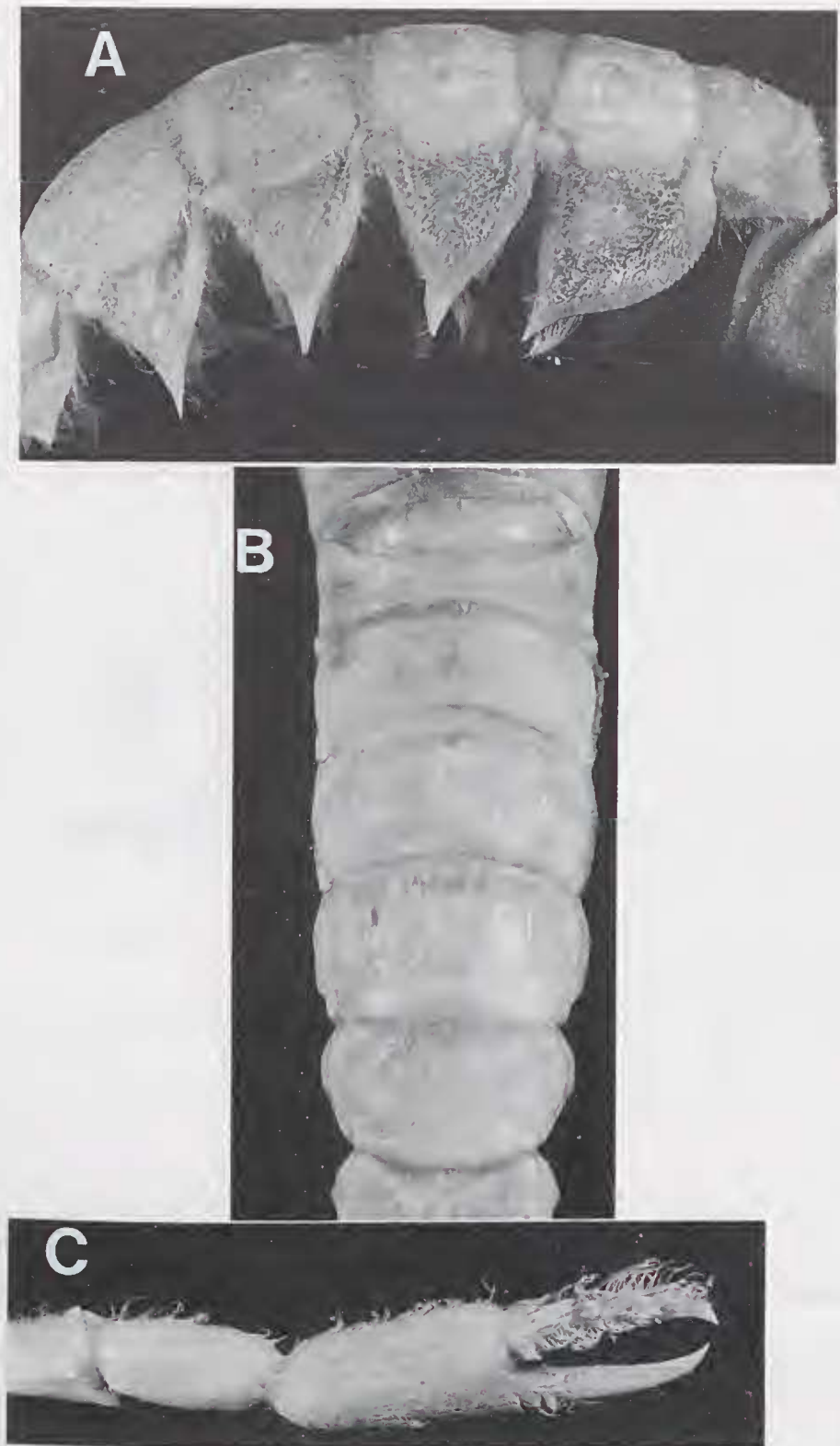


Fig. 3. *Nephropsis holthuisi* n. sp., holotype, 48.0 mm. Anterior part of the abdomen: **A**, dorsal view; **B**, lateral view; **C**, first right cheliped.

the supraorbital spines and the carpus of the second pereopod longer than the palm.

Nephropsis carpenteri can be distinguished from *N. holthuisi* by the absence of spines behind the supraorbital spines, the length of the rostrum being equal to one-third the rest of the carapace, and the anterior borders of the pleura of the second to fifth abdominal segments are clearly more rounded, ending in a short point.

Etymology. It is a pleasure to dedicate this species to L. B. Holthuis, who made the first comprehensive revision of nephropid lobsters and for his continuous support of my work.

Nephropsis serrata n. sp.

(Figs 4-6)

HOLOTYPE - male, 48.7 mm, 25 April 1983, North West Shelf, WA, 18°33.2'S, 117°30.9'E, 392-400 m, coll. A. J. Bruce, Stn NWS-7, NTM Cr008762.

PARATYPES - 2 males, NTM Cr000716, 5 males, NTM Cr000712, 1 male, NTM Cr000561, 36.5-60.7 mm, 25 April 1983, North West Shelf, WA, 18°33.2'S, 117°30.9'E, 392-400 m, Stn NWS-7, coll. A. J. Bruce; 1 male, 47.7 mm, 1 ov. female, 42.6 mm, 27 January 1984, North West Shelf, WA, 15°59'S, 118°19.9'E, 416-420 m, Stn NWS-28, coll. A. J. Bruce, NTM Cr007010; 2 males, 46.8-49.0 mm, 1 ov. female, 46.0 mm, 1 female, 39.7 mm, 27 January 1984, North West Shelf, WA, 17°59.7'S, 118°19'E, Stn NWS-30, 400 m, coll. A. J. Bruce, NTM Cr007011; 1 male, 44.0 mm, 1 ov. female, 48.2 mm, 28 January 1984, North West Shelf, WA, 18°0.8'S, 118°17.0'E, Stn NWS-31, 396-412 m, coll. T. Davis, NTM Cr000616; 1 male, 54.2 mm, 28 January 1984, North West Shelf, WA, 17°59.5'S, 118°18.4'E, Stn 0184-07, 411 m, coll. T. Ward, NTM Cr006900; 1 ov. female, 51.0 mm, 28 January 1984, North West Shelf, WA, 18°00.8'S, 118°17.0'E, Stn 0184/T5, 396-412 m, coll. T. Davis, NTM Cr006314; 2 males, 23.6 mm and one specimen broken, 4 females, 27.4-39.0 mm, 30 January 1984, North West Shelf, WA, 18°52'S, 116°11.1'E, Stn 0184-12, 457 m, coll. T. Ward, NTM Cr007017; 1 male, 38.4 mm, 30 January 1984, North West Shelf, WA, 19°15.0'S, 115°38.0'E, Stn NWS-36, 404 m, coll. A. J. Bruce, NTM Cr000617; 6 males, 31.3-35.2 mm, 1 ov. female, 29.6 mm, 1 female, 28.9 mm, 31 January 1984, North West Shelf, WA, 18°37.4'S, 117°02.4'E, Stn 0184-16, 506 m, coll. T. Ward, NTM Cr007018; 1 male, 41.0 mm, 1 February

1984, North West Shelf, WA, 18°34.7'S, 117°32'E, Stn 0184-23, 357 m, coll. T. Ward, NTM Cr006901; 1 female, 33.6 mm, 5 February 1984, North West Shelf, WA, 16°45.3'S, 119°46.4'E, Stn 0184-43, 503 m, coll. T. Ward, NTM Cr006899; 3 ov. females, 44.5-48.3 mm, 2 November 1985, North West Shelf, WA, 17°22'S, 118°38'E, Stn WH85-15, 430 m, coll. W. Houston, NTM Cr007008; 1 male, 32.0 mm, 2 November 1985, North West Shelf, WA, 17°32'S, 118°48'E, Stn WH85-16, 430 m, coll. W. Houston, NTM Cr007015; 2 females, 35.2 mm and one specimen broken, 3 November 1985, North West Shelf, WA, 17°35'S, 118°43'E, Stn WH85-18, 445 m, coll. W. Houston, NTM Cr007009; 1 female, 46.9 mm, 25 January 1988, N of Seringapatam Reef, WA, 13°26'S, 122°21'E, Stn S7, 470-540 m, coll. B. Wallner, NTM Cr007046; 1 male, 48.6 mm, 1 ov. female, 52.5 mm, 15 January 1990, W of Brenton Bay, WA, 31°32'S, 114°55'E, Stn shot 1, 390 m, coll. CSIRO FV *South Passage*, NTM Cr007349, 2 males, 45.0-52.0 mm; 2 females, 44.0-47.0 mm, 23 January 1990, N of Seringapatam Reef, WA, 13°41'S, 122°30'E, Stn shot 2, 425 m, coll. D. Evans, NTM Cr007512; 3 males, 43.0-52.0 mm, 23 January 1990, N of Seringapatam Reef, WA, 13°33'S, 122°24'E, Stn shot 1, 430 m, coll. D. Evans, NTM Cr007508; 2 males, 35.0-50.0 mm, 3 ov. females, 43.0-50.5 mm, 3 females, 45.0-51.0 mm, 23 November 1990, NE of Mermaid Reef, WA, 16°51'S, 119°54'E, 435 m; 6 males, 32.0-51.0 mm, 4 ov. females, 46.1-48.3 mm, 2 females, 38.3-39.5 mm, 11 December 1990, SW of Rowley Shoals, WA, 18°05'S, 118°11'E, 395 m; 1 male, 46.8 mm, 26 January 1991, Indian Ocean, off WA coast, 23°44.6'S, 112°35.5'E, 600m.

Description of holotype. Carapace slightly granulate, sparsely pubescent. Rostrum with one pair of strong lateral spines located slightly behind midlength. Rostrum horizontal proximally, distal part directed slightly upwards. Rostrum 0.5 times length of carapace. Median groove on rostrum extends past lateral rostral spines. Subdorsal carinae with three pairs of well developed spines, two pairs between lateral spines, supraorbital spines, and one pair slightly behind supraorbital spines. Supraorbital spines well developed, smaller and less elongated than lateral rostral spines. Antennal spines stronger than supraorbital spines. Post-supraorbital spines absent. Distance between level of supraorbital spines and gastric tubercle about 0.4 times distance between gastric tubercle and post-cervical

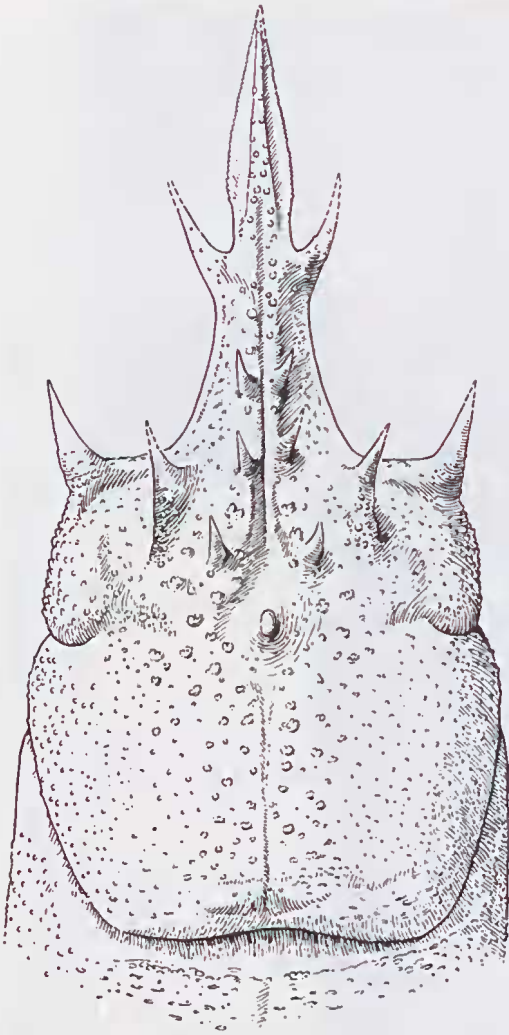


Fig. 4. *Nephropsis serrata* n. sp., holotype, 48.7 mm. Anterior part of the carapace, dorsal view.

groove. Post-cervical, cervical and hepatic grooves distinct, post-cervical groove passing dorsal midline. Carinae on posterior carapace poorly developed. Distance between orbital border and post-cervical groove 1.7 times distance between post-cervical groove and posterior border of carapace.

Second to sixth abdominal somites without median dorsal carina, covered with short, dense hairs. Tergum of first to sixth somites smooth, with some granules. Anterior margins of pleura of second to fifth somites granulate, without spines. Anterior border of pleuron on second segment much more convex than that of pleura on other segments. First five pleura ending in a

short acute point. Pleuron of sixth somite ending in blunt angle, posterolateral angle without sharp spine. Telson quadrate, with spine on each posterolateral angle.

First pair of chelipeds subequal, 1.3 times carapace length (with rostrum), sparsely granulate, covered with long, dense hairs, setae longer on dorsal margins of articles, specially on movable fingers; merus of first pair of pereopods not exceeding rostrum; carpus as long as palm; chela 2.9 times longer than high and shorter than postorbital length of carapace; palm slightly longer than fingers; merus with small subdistal dorsal spine; carpus with anterodorsal spine, two spines present on inner dorsal border at midlength; terminal spine on inner and ventral margins; palm and fingers without spines. Second pair of pereopods exceeds orbital edge by length of merus; carpus of second pair of pereopods as long as palm, three times longer than high; palm 4.2 times longer than high, twice length of fingers. Third pair of pereopods slightly overreaching merus of second pereopods; carpus of third pair of pereopods 0.6 times length of palm, 3.3 times longer than high; palm 3.6 times longer than fingers, 7.3 times longer than high. Fourth pair of pereopods slightly shorter than third pair. Fifth pair of pereopods slightly shorter than fourth pair. Dactylus of fourth pair of pereopods 0.5 times the length of the propodus, those of fifth pair 0.6 times.

Coxal processes on second pair of pereopods rounded. Processes on third legs ending in a single, curved, acute tooth on anterior border, with small rounded, granulate process medially on posterior border.

Exopod of uropods with conspicuous, fully formed diaeresis. Outer border of exopods and endopods terminating in spine.

Variations. Most specimens with three spines on each subdorsal carina, although several individuals have two, four or five spines. Posterolateral angle of pleuron of sixth abdominal segment with well developed spine in most specimens (ending in acute angle in holotype).

Length of rostrum and shape of chela of first pair of pereopods change with the size of specimen. The relationships between postorbital length of carapace and length of the rostrum and the length/height ratio of first right chela are shown in Figures 7 and 8.

Second and third pair of pereopods of female with broadly rounded coxal process, without spines. Thelycum bisected by median groove,

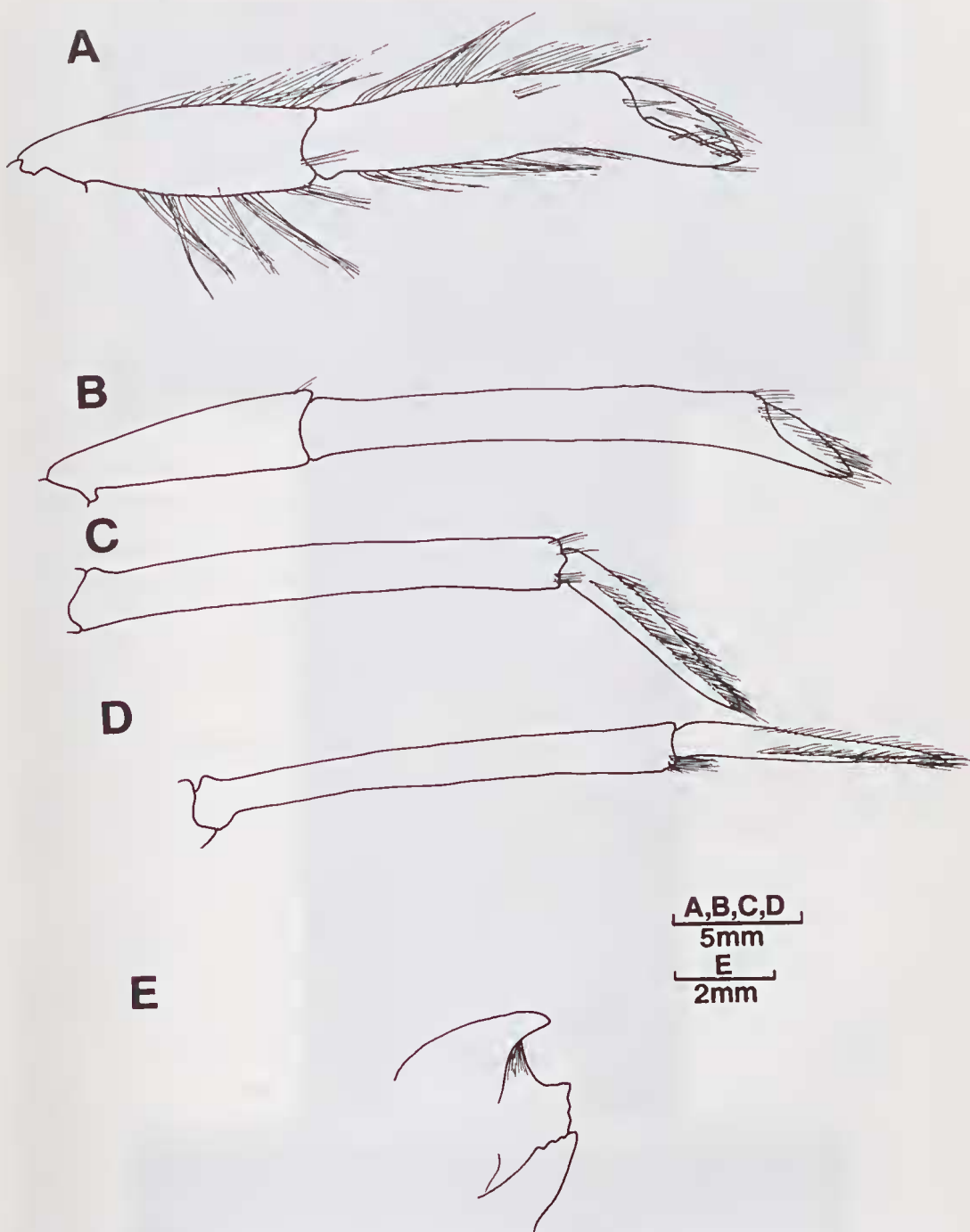


Fig. 5. *Nephropsis serrata* n. sp., holotype, 48.7 mm: A, second pereopod; B, third pereopod; C, fourth pereopod; D, fifth pereopod; E, coxa of the third left pereopod.

anterior margin with two rounded lobes, posterior incision wide, deep.

Remarks. The males examined ranged in size from 23.6 to 60.7 mm, females from 27.4 to 52.5

mm. The smallest ovigerous females observed were 42.6 mm. The species was collected on the North West Shelf region of Australia, from depths between 390 and 600 m.

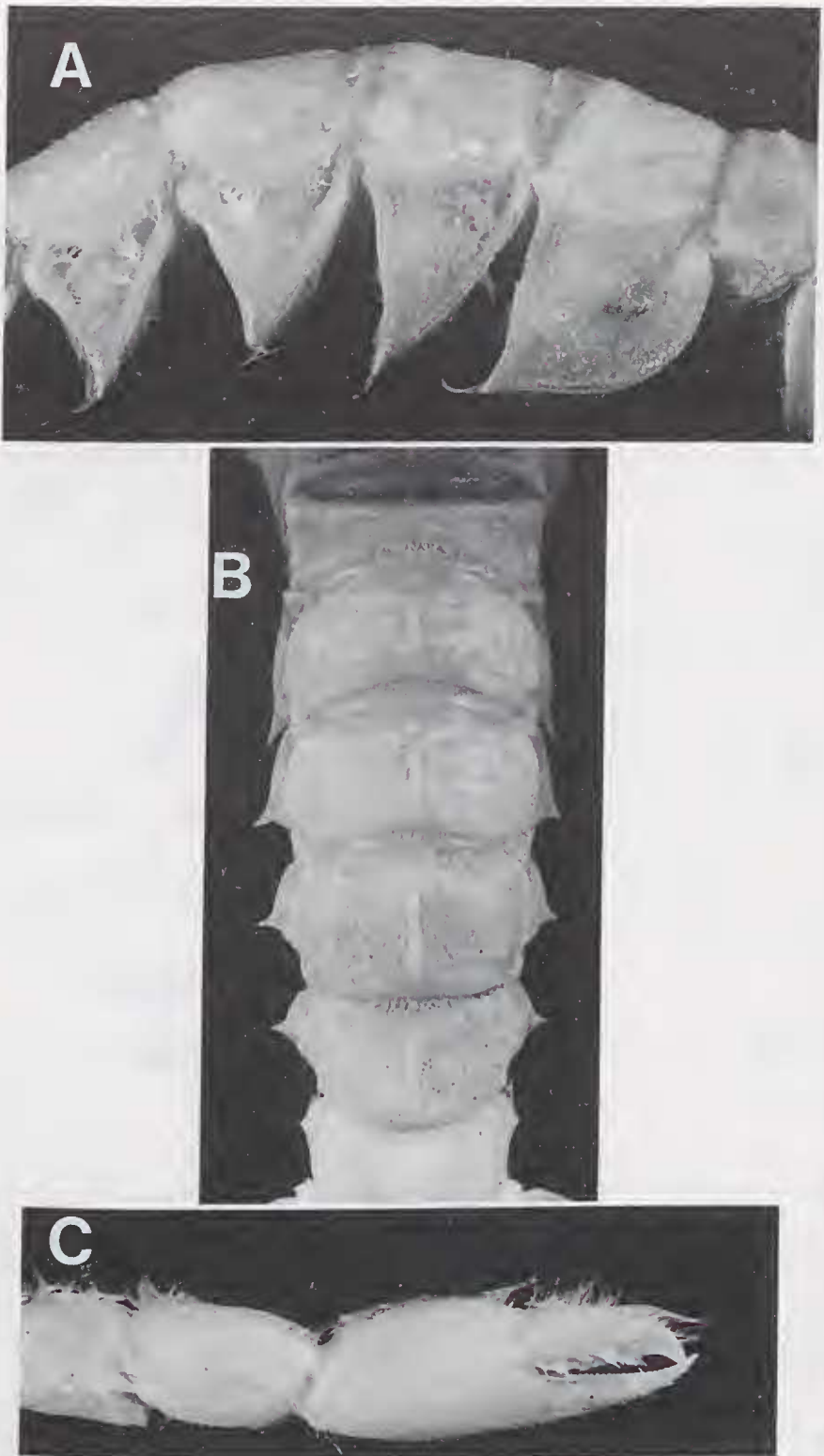


Fig. 6. *Nephropsis serrata* n. sp.; holotype, 48.7 mm. Anterior part of the abdomen: A, dorsal view; B, lateral view; C, first right cheliped of paratype; LC= 46.5 mm.

Nephropsis stewarti, from Indian Ocean and western Pacific waters, is most closely allied to the new species. Both species were collected together in NW Australia and belong to a group of species which share these features: one pair of lateral spines on the rostrum, no spines on the anterior borders of the abdominal pleura, abdomen without a dorsal median carina, dorsal surface of the telson without spines and a diaeresis present on the uropods.

However, the new species is readily differentiated from *N. stewarti* by such features as:

- Subdorsal carinae granulate in *N. stewarti*. In *N. serrata* there are at least three well developed spines on each carina.
- Lateral rostral spines distinctly more elongate than the supraorbital in *N. serrata*, whereas in *N. stewarti* they are similar in size.
- Chela of first pair of pereopods more elongate in *N. stewarti* than in *N. serrata*. In *N. stewarti* the chelae are equal, or are more than three times longer than high, whereas in *N. serrata* they are equal or less than three times longer than high. This ratio changes with the size of the specimen (Fig. 7), however the difference is quite clear when comparing specimens of similar size.
- The rostrum appears to be slightly shorter in *N. serrata* than in *N. stewarti* (Fig. 8).

Etymology. From the latin *serra*, saw, in reference to the spines on the subdorsal carinae.

Nephropsis stewarti Wood-Mason, 1873

Nephropsis stewarti Wood-Mason, 1873a: 60 (type-locality: Ross Island, Andaman Sea, 480-560 m).- 1873b: 40, pl. 4. - Macpherson, 1990: 302 (key), 312, Figs 5e, 10, 11c-d, 16e (references).

Material examined. 1 male, 79.7 mm, 28 January 1984, North West Shelf, WA, 18°00.8'S, 118°17.0'E, Stn 0184-T5, 396-412 m, coll. T. Davis, NTM Cr008763; 5 males, 33.1-86.5 mm, 3 females, 33.0-74.4 mm, 31 January 1984, N of Glomar Shoal, WA, 18°37.4'S, 117°02.4'E, Stn 0184-16, 506 m, coll. T. Ward, NTM Cr007016 (5 specimens), NTM Cr007510 (1 specimen); 1 male, 51.1 mm, 5 February 1984, North West Shelf, WA, 16°45.3'S, 119°46.4'E, Stn 0184-43, 503 m, coll. T. Ward, NTM Cr008764; 1 female, 61.2 mm, 15 November 1985, Marian Plateau, Queensland, 19°38.1'S, 150°32.7'E, Stn 0685-op2, 312 m, coll. A. J. Bruce, NTM Cr006902; 4 males, 69.0-58.3 mm, 8 January 1986, E of Dunk Island, Queensland, 18°00'S 147°02'E, Stn HL86-1, 220 m, coll. H. K. Larson, NTM Cr008766; 2 males, 80.0-87.7 mm, 1 July 1988, N of Cobourg Peninsula, Arafura Sea, 8°38.6'S, 132°00'E, 525-540 m, coll. M. Sachse, NTM Cr007013; 7 males, 76.6-95.0 mm, 1 female, 73.7 mm, July 1988, N of Cobourg Peninsula, Arafura Sea, 8°34.2'S, 131°31.02'E, 480 m, coll. M. Sachse; NTM Cr007019; 2 females, 61.0-68.5 mm, 21 January 1990, NE of Ashmore Reef, WA, 11°26'S, 124°12'E, Stn shot 2, 425-

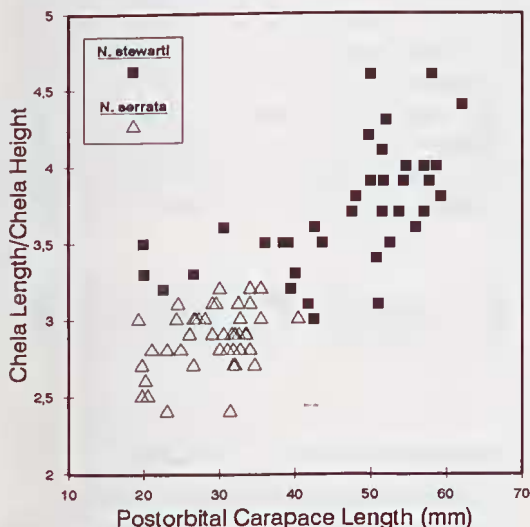


Fig. 7. Relationship between postorbital carapace length and right chela length/chela height ratio for *Nephropsis stewarti* Wood-Mason and *N. serrata* n. sp.

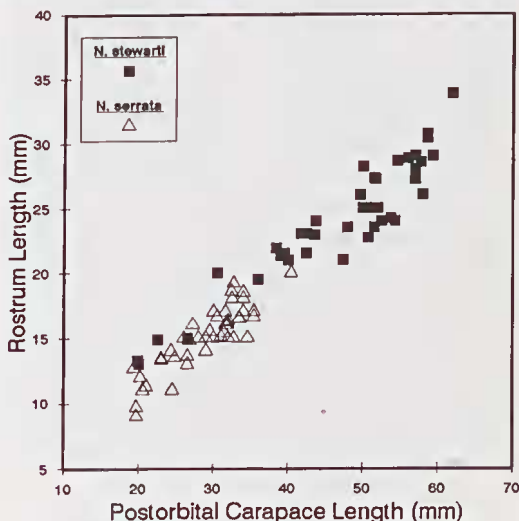


Fig. 8. Relationship between postorbital carapace length and rostrum length for *Nephropsis stewarti* Wood-Mason and *N. serrata* n. sp.

440 m, coll. D. Evans, NTM Cr007509; 1 male, 64.0 mm, 22 January 1990, NW of Ashmore Reef, WA, 12°01'S, 122°47'E, Stn shot 1, 450 m, coll. D. Evans, NTM Cr007521; 1 male, 55.5 mm, 1 female, 41.5 mm, 23 January 1990, N of Seringapatam Reef, WA, 13°33'S, 122°24'E, Stn shot 1, 430 m, coll. D. Evans, NTM Cr008765; 2 males, 75.7-85.0 mm, 1 ov. female, 71.5 mm, 1 female, 76.5 mm, 25 January 1990, SE of Scott Reef, WA, 14°15'S, 121°59'E, Stn shot 4, 430-460 m, coll. D. Evans, NTM Cr007459; 2 males, 75.0-77.0 mm, 1 female, 61.0 mm, 31 January 1990, N of Mermaid Reef, WA, 15°54'S, 120°19'E, Stn shot 1, 570-575 m, coll. D. Evans, NTM Cr007458; 1 male, 65.5 mm, 23 November 1990, N of Mermaid Reef, WA, 16°51'S, 119°54'E, 435 m; 1 ov. female, 76 mm, NW of Bedout Island, WA, 18°58'S, 118°23'E, 395 m; 2 males, 78.6-79.0 mm, 1 ov. female, 65.3 mm, 13 December 1990, SW of Imperieuse Reef, WA, 17°59'S, 118°19'E, 395 m; 2 males, 67.7-84.0 mm, 1 female, 76.5 mm, 13 December 1990, SW of Imperieuse Reef, WA, 18°05'S, 118°11'E, 400 m.

Remarks. The males examined ranged in size from 33.1 to 95.0 mm, the females from 33.0 to 76.5 mm. They were taken in depths between 312 and 575 m. This is the first record of this species in Australian waters.

Nephropsis stewarti was originally described from a female (missing the first pair of pereopods) caught off the eastern coast of the Andaman Islands, at depths of 480 - 560 m (Wood-Mason, 1873 a, b). Subsequently the species has been recorded from South Africa and Madagascar to the Gulf of Aden, Andaman Sea, Bay of Bengal, Indonesia, Philippines and Japan at depths of 170 - 1000 m (Macpherson, 1990). Specimens from all these localities share the main characters of the species, however, several small differences occur. For instance, the chela of the first pair of pereopods is stouter in specimens from the Philippines, compared with those from other areas. The clear difference of the shape of the chela of the first pair of pereopods noted between *N. stewarti* and the closely related new species *N. serrata*, suggests the necessity of a revision of *N. stewarti*. This analysis would clarify the nature of this variation and the possible existence of several valid species.

Nephropsis suhmi Bate, 1888

Nephropsis suhmi Bate, 1888: 181, pl. 13, fig. 3 (type locality: Indonesia, off Aru Islands, 1464

m). - Macpherson, 1990: 302 (key), 306, figs 5b, 7d-f, 8c-d, 16b (see references and synonymy).

Material examined. 1 female, 52.7 mm, 25 January 1991, off WA coast, 22°00.5'S, 113°08.5'E, 1460-1700 m, CSIRO.

Remarks. The specimen collected in north-west Australia, agrees with the type material and other specimens recorded by Macpherson (1990).

The species was previously reported from Madagascar, Maldives Islands, Arabian Sea, New Caledonia, northeast Australia, and Indonesia, from depths of 786 - 1893 m.

Nephropsis sulcata Macpherson, 1990

Nephropsis sulcata Macpherson, 1990: 303 (key), 319, figs 13e-g, 14a-b, 15a-b, 16g (type locality: Philippines, West of Luzon, 970 m).

Material examined. 1 male, 36.9 mm, 18 November 1985, Marian Plateau, Coral Sea, 22°57'S, 154°25.5'E, Stn 0685-9, 678-695 m, coll. CSIRO FRV *Soela*, NTM Cr007012; 3 males, 30.5-37.3 mm, 5 females, 31.6-37.8 mm, 25 January 1988, W of Ashmore Reef, WA, 13°06'S, 122°18'E, Stn S9, 900-1000 m, coll. B. Wallner, NTM Cr006997; 1 male, 38.7 mm, 25 January 1990, W of Scott Reef, WA, 14°07'S, 122°06'E, Stn shot 3, 415 m, coll. D. Evans, NTM Cr007514; 1 female, (specimen broken), 25 March 1990, Exmouth Plateau, WA, 20°36'S, 112°58'E, 932 m, coll. D. Evans, NTM Cr007506.

Remarks. The specimens caught off north-western Australia (415-1000 m) generally agree with the type material. However, in two specimens the anterior border of the pleuron of the second abdominal segment has only rough granules instead of a spine.

The species was previously recorded from Madagascar, Laccadive Sea, South China Sea, Philippines, Chesterfield Islands, New Caledonia, and NE Australia, from depths of 750 - 1115 m.

Key to the species of the genus *Nephropsis* recorded from Australian waters.

1. a Exopod of uropod without a diaeresis.....
.....*N. suhmi*
- b Exopod of uropod with a diaeresis.....2
2. a Dorsal surface of telson with a well-developed spine*N. acanthura*
- b Dorsal surface of telson without a well-developed spine3

- 3. a Rostrum with two pairs of lateral spines*N. sulcata*
- b Rostrum with one pair of lateral spines4
- 4. a Abdomen with a medium carina*N. holthuisi*
- b Abdomen without a median carina5
- 5. a Subdorsal carinae granulate*N. stewarti*
- b Subdorsal carinae with at least three well developed spines*N. serrata*

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REFERENCES

Bate, C.S. 1888. Report on the Crustacea Macrura collected by H.M.S. "Challenger" during the Years 1873-76. *Report on the Scientific Results of the Voyage of H.M.S. Challenger, Zoology* **24**: i-xc + 942 p., pls 1-150.

Holthuis, L.B. 1974. The lobsters of the superfamily Nephropidae of the Atlantic ocean (Crustacea: Decapoda). *Bulletin of Marine Science* **24**: 723-884.

Macpherson, E. 1990. Crustacea Decapoda: On a collection of Nephropidae from the Indian Ocean and Western Pacific. In: A. Crosnier (ed.), *Résultats des Campagnes MUSORSTOM, Volume 6. Memoires du Museum national d'Histoire naturelle, Paris (A)*, **145**: 289-328.

Wood-Mason, J. 1873a. On *Nephropsis Stewarti*, a new genus and species of macrourus crustaceans, dredged in deep water off the eastern coast of the Andaman islands. *Annals and Magazine of Natural History* (4) **12**: 59-64.

Wood-Mason, J. 1873b. On *Nephropsis Stewarti*, a new genus and species of macrourus crustaceans, dredged in deep water off the eastern coast of the Andaman islands. *Journal of the Asiatic Society of Bengal* **42**: 39-44.

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